Researchers determine benefit of using human cells for spinal cord injury repair[1]

Scientists have discovered that a specific type of human cell, generated from stem cells and transplanted into spinal cord injured rats, provides tremendous benefit, not only repairing damage to the nervous system but helping the animals regain locomotor function as well.

The study, published today in the journal PLoS ONE[2], focuses on human astrocytes – the major support cells in the central nervous system – and indicates that transplantation of these cells represents a potential new avenue for the treatment of spinal cord injuries and other central nervous system disorders.

Working together closely, research teams at the University of Colorado School of Medicine[3] and University of Rochester Medical Center[4] have made a major breakthrough in the use of human astrocytes for repairing injured spinal cords in rats.

"We've shown in previous research that the right types of rat astrocytes are beneficial, but this study brings it up to the human level, which is a huge step," said Chris Proschel, Ph.D.,[5] lead study author and assistant professor of Genetics at the University of Rochester Medical Center. "What's really striking is the robustness of the effect. Scientists have claimed repair of spinal cord injuries in rats before, but the benefits have been variable and rarely as strong as what we've seen with our transplants."

There is one caveat to the finding – not just any old astrocyte will do. Using stem cells known as human fetal glial precursor cells, researchers generated two types of astrocytes by switching on or off different signals in the cells. Once implanted in the animals, they discovered that one type of human astrocyte promoted significant recovery following spinal cord injury, while another did not.

"Our study is unique in showing that different types of human astrocytes, derived from the exact same population of human precursor cells, have completely different effects when it comes to repairing the injured spinal cord," noted Stephen Davies, Ph.D.,[6] first author and associate professor in the Department of Neurosurgery[7] at the CU School of Medicine. "Clearly, not all human astrocytes are equal when it comes to promoting repair of the injured central nervous system."

The research teams from New York and Colorado also found that transplanting the original stem cells directly into spinal cord injured rats did not aid recovery. Researchers believe this approach – transplanting undifferentiated stem cells into the damaged area and hoping the injury will cause the stem cells to turn into the most useful cell types – is probably not the best strategy for injury repair.

According to Mark Noble[8], director of the University of Rochester Stem Cell and Regenerative Medicine Institute[9], "This study is a critical step toward the development of improved therapies for spinal cord injury, both in providing very effective human astrocytes and in demonstrating that it is essential to first create the most beneficial cell type in tissue culture before transplantation. It is clear that we can not rely on the injured tissue to induce the most useful differentiation of these precursor cells."

To create the different types of astrocytes used in the experiment, researchers isolated human glial precursor cells, first identified by Margot Mayer-Proschel, Ph.D., [10]associate professor of Genetics at the University of Rochester Medical Center, and exposed these precursor cells to two different signaling molecules used to instruct different astrocytic cell fate – BMP (bone morphogenetic protein) or CNTF (ciliary neurotrophic factor).

Transplantation of the BMP human astrocytes provided extensive benefit, including up to a 70 percent increase in protection of injured spinal cord neurons, support for nerve fiber growth and recovery of locomotor function, as measured by a rat's ability to cross a ladder-like track.

In contrast, transplantation of the CNTF astrocytes, or of the stem cells themselves, failed to provide these benefits. Researchers are investigating why BMP astrocytes performed so much better than CNTF astrocytes, but believe multiple complex cellular mechanisms are probably involved.

"It is estimated that astrocytes make up the vast majority of all cell types in the human brain and spinal cord, and provide multiple different types of support to neurons and other cells of the central nervous system," said Jeannette Davies, Ph.D., assistant professor in the neurosurgery department at the CU medical school and co-lead author of the study. "These multiple functions are likely to all be contributing to the ability of the right human astrocytes to repair the injured spinal cord."

With these results, the Proschel and Davies teams are moving forward on the necessary next steps before they can implement the approach in humans, including testing the transplanted human astrocytes in different injury models that resemble severe, complex human spinal cord injuries at early and late stages after injury.

"Studies like this one bring increasing hope for our patients with spinal cord injuries," said Jason Huang, M.D.,[11] associate professor of neurosurgery[12] at the University of Rochester Medical Center and chief of neurosurgery at Highland Hospital. "Treating spinal cord injuries will require a multi-disciplinary approach, but this study is a promising one showing the importance of modifying human astrocytes prior to transplantation and has significant clinical implications."

In addition to Proschel and Noble, Davies and Davies, Mayer-Proschel and Chung-Hsuan Shih from the University of Rochester Medical Center contributed to the research. Portions of this research were funded by the New York State Spinal Cord Injury Research Program, the Carlson Stem Cell Fund and private donations by the international spinal cord injury community.

Women share journeys of success at expanded symposium[13]

[flagallery gid=11 name="Gallery"]

Personal journeys of success in personal and professional settings and the techniques that help make them possible were among the topics addressed during this year's University of Colorado Women Succeeding Symposium.

The event, Feb. 24-25 at the University of Colorado Colorado Springs, drew more than 180 faculty and staff participants from all four campuses. The CU Faculty Council's Committee on Women[14] has sponsored the annual symposium for the past eight years as part of ongoing efforts to advance and support the success of women in academia.

This year saw the expansion of the symposium to include a dinner event Thursday evening. Karen Jonscher, co-chair of the Faculty Council Women's Committee, said 86 people attended the dinner, which focused on networking between the different campuses.

"It was fabulous," Jonscher said. "The dinner and Network Café focused on support of women at CU and what we can do together and individually."

Jonscher said the committee received positive feedback after last year's symposium. "We've heard of people from last year whose lives were changed by the symposium," she said. "We hope that is happening again this year."

Friday's events began with an early breakfast and keynote address by Susan Avery, president and director of the Woods Hole (Mass.) Oceanographic Institution. Avery previously served as a member of the CU-Boulder faculty and was provost and executive vice chancellor for academic affairs.

Avery spoke of the decisions and journey that took her from the University of Illinois to CU-Boulder and finally to her current post. She said every decision she has made required the courage to change.

"I've made my decisions based on the potential for personal and professional growth," she said. "I ask myself, 'Can I make a difference and would I enjoy it?'"

Participants spent the rest of the morning attending breakout workshops, with topics ranging from creating sustainable change to the challenge of balancing a career and motherhood.

"I'm a new department chair and all the practical information ... was very useful, especially the use of negotiation in our day-to-day work," said Julaine Field, associate professor in the College of Education at UCCS, on the session addressing negotiation and the gender divide.

Field, chair of counseling and human services, also led a workshop addressing workplace bullying.

"I want people to feel nourished with all the new information and ideas," Field said. "Knowing that someone else can identify with your experiences is empowering and validating."

After the breakout sessions, participants regrouped for lunch and the presentation of the Elizabeth D. Gee Memorial Lectureship Award, which recognizes and honors an outstanding CU faculty member for efforts to advance women in academia, interdisciplinary scholarly contributions and distinguished teaching. Established in 1992, the award honors the late Elizabeth Gee, wife of former CU President Gordon Gee and a faculty member of the CU College of Nursing.

This year's honor went to Laura M. Borgelt, associate professor of clinical pharmacy and family medicine at CU Denver.

"I've been to several symposiums," Borgelt said. "I never thought I'd be up here receiving the award."

She asked attendees to write down a personal passion that made them feel like their truest self. "Whatever you wrote down," she said, "that is your key to academic success."

Borgelt's keynote address outlined her six "Pearls to Success," using her passion of swimming to illustrate each element: being in the moment; exploring the unknown; asking others to engage; uncover your passion and make it your focus; treating yourself and others with empathy, respect and integrity; and knowing you are beautiful.

"I hope you can see that this award honors all of us," Borgelt said in her closing remarks. "We are all beautiful."

Five questions for Hilda Brehm[15]

Hilda Brehm with a pine tree she planted on the CU-Boulder grounds a couple of weeks before the birth of her son Karl, now 19.

Spring soon will erupt on the east campus of the University of Colorado Boulder, bringing branches laden with greenery, colorful blossoms and fragrant grasses, but something will be missing.

The junipers won't test Hilda Brehm anymore. Her special garden no longer will benefit from her green thumb. After 30 years of working at the university – 20 as a groundskeeper – Brehm hung up her shears and gloves on Monday, Feb. 28.

Though her hard work sometimes went unnoticed, commented an employee at the Assessment and Research Building, in the area where Brehm manages the landscaping, she loved her job, was kind to everyone and was extremely proud of her connection to the university.

Brehm came to the university in 1981 after her sisters encouraged her to move from her home in Chihauhau, Mexico, and follow them to the United States. At first it was hard to live in a new country – she said teasingly that it took her two years to say "hi" to anyone – but soon she came to love her new surroundings. In 1991, she said, she was lucky enough to begin work in the grounds department where she could spend her time outside taking care of flowers for people to enjoy. It truly became a labor of love, even after long days in the red-hot sun.

— Cynthia Pasquale

1. What is your favorite part of the job? What is the hardest part of the job?

Hilda Brehm (holding flowers) marked her retirement by celebrating with work colleagues, friends and family, including her two sons, far right.

My favorite part is playing with the flowers and being outside all day. I love being outside; I can't picture myself being inside for more than two hours. Sometimes I'll visit people in their offices, but for me, the outside is my office where I'm surrounded by the beautiful mountains and trees.

The lilies and roses are my favorite flowers. Roses fill up my heart. They are beautiful and tender and smell so nice. We don't have a lot of money to buy flowers, so sometimes I cut little pieces off plants then grow them in my special garden on campus.

Some seasons, the junipers make me really sick. I have a love-hate relationship with them. I keep cutting and cutting them; sometimes they win, but sometimes I win and make them really beautiful.

The hardest part is sometimes in the winter when the temperatures go below zero and the snow feels heavy, but that season doesn't last long and I can return to being the happiest groundskeeper on the planet.

Especially in the flowering season, every day is special. Sometimes I'll see a person looking a little sad. After so many years, you know everyone's face. So on those unhappy days, I put a few flowers together for them and try to make them happier. It's a beautiful thing to be able to make someone feel happy.

Brehm's two sons, David and Karl

2. What is an accomplishment you are most proud of?

My two boys, David, 26, and Karl, 19, and, of course, my 30 years at CU is a big thing. Now I can retire at age 55.

3. What will you miss most about the university and your job?

There are so many beautiful faces and people in this place. I'll miss being outside the whole day and the people I know. Everyone is so kind. On the cold and snowy days, people would invite me into their offices for a cup of coffee or bring me a cup outside. It's the little human things I'll miss most.

4. Do you have a motto that you live by?

When you have something to do, you can choose to have a long face or you can choose to do it in a happy way. I choose to do it with happiness.

5. What are your plans after retirement?

The first thing I will do is to continue to enjoy life and be happy. I'm planning a trip to Alaska with my two boys. But really, I need to be retired before I start thinking about what I want to do next.

I went to Alaska more than a year ago, and everything there is so beautiful, it feels like you are close to God. So when the boys suggested we go together, I said yes. I've been to Spain and Italy, but Alaska is my favorite.

I'll also do some volunteer work for the Red Cross. I feel that it's the right thing to do because they once helped me.

And I like to go camping and fishing – walleye are so good when they are fresh – and spend lots of time in the mountains and with my boys.

Revolution in Egypt: Causes and consequences[19]

By Kristen Chapman

Four University of Colorado Boulder faculty members recently gathered for an on-campus panel discussion on the recent protests in Egypt and their ramifications for the United States.

During the Feb. 16 event, organized by retired sociology professor Tom Mayor, the panel – Haytham Bahoora, Nabil Echchaibi, Najeeb Jan and John Willis – covered a wide range of topics, focusing on the role of the media, history and sociological impacts. About 200 students and community members attended.

"If we're going to call it a revolution, it's something that's in process," said the history department's Willis. "We need to see an undoing of the long-standing policy" based on decades of authoritarian rule.

According to Bahoora, department of Asian languages and civilization, while ousted leader Hosni Mubarak was commonly referred to as President Mubarak in the media, the more accurate title would have been Dictator Mubarak.

As for the role played by users of the social media network Facebook in first instigating the protests, Echchaibi from the School of Journalism and Mass Communication said that aspect has been overstated. "The (social) media was an instrument, not how it's been birthed. The road has already been paved for years."

During the uprisings, Bahoora said, Al Jazeera was hard at work unveiling government corruption and human rights violations. While the news network is by no means an objective source of information, it aired a live feed from Tahrir Square in Cairo where the military threw teargas into a peacefully assembled crowd. The irony, he said, is that the tear gas bombs were labeled, "Made in the United States."

Jan, from the geography department, said he believes the U.S. seemingly supported Mubarak because of his instrumental role in implementing American policy. The U.S. military has continued to increase its presence in Egypt since 1967.

With the support of the United States backing Mubarak, "The distinction between democracy and dictatorship has been erased," Jan said, later adding, "Democracy has happened in the Middle East in spite of the U.S., not because of it."

Film featuring Boulder assistant professor takes high honor at festival[20]

Osnes

A film featuring **Beth Osnes**, an assistant professor in the department of theater and dance at the University of Colorado Boulder, was named the Best Colorado Film after its premiere last month at the Boulder International Film Festival.

"Mother: Caring Our Way Out of the Population Dilemma" casts a light on a root cause of the planet's largest environmental, humanitarian and social crises. Since the 1960s, the world population has nearly doubled, adding more than 3 billion people. The film introduces Osnes, a mother, child-rights activist and the last sibling of a family of 12, as she navigates the complexities of the population issue and highlights a different path to solve it. Osnes is co-founder of Mothers Acting Out.

The film was directed by Christopher Fauchere and produced by Fauchere and Joyce Johnson.

Meeting summary: Boulder Faculty Assembly[22]

Editor's note: In addition to news coverage of meetings of the systemwide Faculty Council and Staff Council, the Faculty and Staff Newsletter posts meeting summaries or minutes as provided by councils and assemblies at the campus level. To submit material, please e-mail Jay.Dedrick@cu.edu[23].

Boulder Faculty Assembly meeting
Feb. 3, 2011

For more detailed information please visit www.colorado.edu/BFA[24] to read the most recent minutes, reports, current motions before the assembly and other items of interest to the faculty.

I. Chair's Report:
BFA Election. All faculty are urged to participate in the BFA election. Ballots will be made available on the BFA's website. The BFA is also seeking nominees for BFA committees and for Boulder representatives on the systemwide Faculty Council and its committees. **Faculty Governance Event Feb. 24, 3 to 4:30 p.m.** The BFA invited all faculty to this drop-in style event. BFA members were asked to bring along at least one colleague. The chancellor spoke on the important role of faculty in governing the campus. **CU Branding Initiative.** The BFA has requested a copy of the branding study report. **Instructor Status.** Faculty Council is monitoring a bill on instructor status (HB 11-1057) and will meet with CU's V.P. for H.R. to learn more. The BFA Faculty Affairs Committee continues work on steps UCB could take to implement parts of the BFA's motion. Tenure-track lines for teaching faculty is stalled at the level of Faculty Council which, rather than voting it down, has tabled it for now.
II. Notice of Motion: Regarding Responsible Behavior and Displays Related to Race, Gender, and Sexuality The Diversity Committee presented a draft resolution and requested input: Susan.Moore@Colorado.edu[25].

III. Special Report: Student Behavior Consultation (SBC): Deborah Coffin, associate vice chancellor for student affairs and dean of students, reported on a new process, SBC, which creates a central warehouse of information and outreach to identify and monitor students who might be a threat to themselves or others. SBC avoids serving as a confidential reporting office, so it can do more to take preventive action. Reports of concerning behavior should be made directly to Coffin's office. Once a student is identified, SBC creates plans for intervention, accountability and the student's future at UCB.

IV. Special Report: Voluntary System of Accountability (VSA): Lou McClelland, director of institutional analysis, reported on UCB participation in the VSA and its associated Collegiate Learning Assessment test (CLA).The main activity of VSA is a national website to display data about public colleges in comparable form,www.collegeportraits.org/CO/CU-Boulder[26]. The site has seen very few users so far.

V. Special Report: Budget Update: Highlights of Senior Vice Chancellor Porreca's report:
The State has balanced the current year's budget without asking higher ed to take additional cuts in the current year. Thanks are largely due to the president and chancellors' lobbying efforts. The Indirect Cost Recovery rate has

increased slightly. Last year grant funding grew to $350 million not including stimulus funds. Next year grant funding may be impacted by federal budget cuts. Colorado's 2010 Higher Education Flexibility Act requires institutions to submit a proposal well in advance for tuition increases of more than 9 percent. CU-Boulder submitted a 9.5 percent 'placeholder' proposal and if the state makes no substantial cuts next year, CU-Boulder can drop its placeholder proposal. The state's revenue forecast is due in March. The JBC will use it to create a preliminary state budget. While there is reason to be cautiously optimistic there remains a strong possibility of additional cuts. The campus is hoping the cuts, if any, will not be as large as in the past two years.

VI. The next BFA meeting is 4-5:30 p.m. Thursday, March 3, in Wolf Law room 204.

Speakers include Regent Joe Neguse and Athletic Director Mike Bohn. All faculty are welcome to attend.

Study shows acupressure effective in helping with brain injury[27]

Photo by Casey A. Cass/University of Colorado

Jin Shin acupressure treatment , an ancient form of medicine, has been shown by a CU-Boulder research team to be an effective complementary treatment for those suffering from mild traumatic brain injury.

Photo by Casey A. Cass/University of ColoradoJin Shin acupressure treatment , an ancient form of medicine, has been shown by a CU-Boulder research team to be an effective complementary treatment for those suffering from mild traumatic brain injury.

A new University of Colorado Boulder study indicates an ancient form of complementary medicine may be effective in helping to treat people with mild traumatic brain injury, a finding that may have implications for some U.S. war veterans returning home.

The study involved a treatment known as acupressure in which one's fingertips are used to stimulate particular points on a person's body – points similar to those stimulated with needles in standard acupuncture treatments, said CU-Boulder Professor Theresa Hernandez, lead study author. The results indicate a link between the acupressure treatments and enhanced cognitive function in study subjects with mild traumatic brain injury, or TBI.

"We found that the study subjects with mild traumatic brain injury who were treated with acupressure showed improved cognitive function, scoring significantly better on tests of working memory when compared to the TBI subjects in the placebo control group," said Hernandez, a professor in CU-Boulder's psychology and neuroscience department. "This suggests to us that acupressure could be an effective adjunct therapy for those suffering from TBI."

The acupressure treatment type used in the study is called Jin Shin. For the study, Hernandez and her colleagues targeted the 26 points on the human body used in standard Jin Shin treatments ranging from the head to the feet. The study subjects all received treatments by trained Jin Shin practitioners.

According to practitioners, Jin Shin acupressure points are found along "meridians" running through the body that are associated with specific energy pathways. It is believed that each point is tied to the health of specific body organs, as well as the entire body and brain, Hernandez said.

"Think of the meridians as freeways and the pressure points as towns along the way," she said. "When there is a traffic jam in Denver that causes adverse effects as far away as Boulder, clearing the energy blocks, or in this case traffic jams, helps improve flow and overall health."

The study involved 38 study subjects, each of whom was randomly assigned to one of two groups – an experimental group that received active acupressure treatments from trained experts and a control group that received treatments from the same experts on places on the body that are not considered to be acupressure points, acting as a placebo. The study was "blinded," meaning the researchers collecting data and the study participants themselves did not know who was in the experimental group or the placebo group until the end of the study.

The team used a standard battery of neuropsychological tests to assess the results. In one test known as the Digit Span Test, subjects were asked to repeat strings of numbers after hearing them, in both forward and backward order, to see how many digits they could recall. Those subjects receiving active acupressure treatments showed increased memory function, Hernandez said.

A second standard psychology test used for the study, called the Stroop Task, measured working memory and attention. Test subjects were shown the names of colors on a computer screen. When the names of the particular colors are viewed in a different color of type – such as "green" spelled with blue letters – test subjects take longer to name the color of the lettering and the results are more error-prone, according to Hernandez.

The Stroop Test subjects in the CU-Boulder study wore special caps wired with electrodes to measure the brain activity tied to specific stimuli. The results showed those who received the active acupressure treatments responded to stimuli more rapidly than those who received the placebo treatments, Hernandez said.

"We were looking at synchronized neural activity in response to a stimulus, and our data suggest the brains of those in the active acupressure group responded differently when compared to those in the placebo acupressure group," she said.

A paper on the subject was published in the January issue of the Journal of Neurotrauma, a peer-reviewed publication on the latest advances in both clinical and laboratory investigations of traumatic brain and spinal cord injury. Co-authors on the study included CU-Boulder's Kristina McFadden, Kyle Healy, Miranda Dettman, Jesse Kaye and Associate Professor Tiffany Ito of psychology and neuroscience.

Funded by the Colorado Traumatic Brain Injury Trust Fund, the study is believed to be one of the first placebo-controlled studies ever published in a peer-reviewed medical journal showing the benefit of acupressure to treat patients with TBI, Hernandez said.

"We would like to see if the Jin Shin treatment is useful to military veterans returning home with traumatic brain injury, a signature wound prevalent in the wars in Iraq and Afghanistan," Hernandez said. The Jin Shin acupressure treatment can be taught to family and friends of those with TBI and can even be used as a self-treatment, which could allow for more independence, she said.

In a 2010 stroke study led by Hernandez, the researchers concluded that Jin Shin acupressure triggered a larger and faster relaxation response during active treatments and a decreased stress response following active treatments compared with what was seen in placebo treatments. Hernandez and her colleagues are embarking on a new study on the use of Jin Shin acupressure in athletes to see if the enhanced relaxation response and decreased stress seen in the stroke study can reduce the likelihood of athletic injury.

In 2002, Hernandez partnered with former Colorado Rep. Todd Saliman to initiate the Colorado Traumatic Brain Injury Trust Fund, a statute that has generated nearly $2 million to the state annually since 2004 from surcharges to traffic offenses like driving while impaired and speeding. Roughly 65 percent of the money goes toward rehabilitation and care services for individuals with TBI, about 30 percent goes for TBI research and 5 percent for TBI education. Because of the statute, nearly 4,000 Colorado citizens with TBI have received care and rehabilitation services for brain injuries.

Hernandez will be honored March 3 in Denver by the Colorado Traumatic Brain Injury Program with the establishment of the annual Theresa D. Hernandez TBI Trust Fund Community Award, becoming its first recipient. Saliman also will be honored at the ceremony.

High school students gain exposure to careers in biomedicine, cancer research[29]

[30]
Some 120 high school students learned about prospective careers in biomedicine and cancer research at the second annual Learn about Cancer Day. Co-sponsored by the University of Colorado Cancer Center and the Colorado BioScience Association, students from the Aurora Lights program, Rock Canyon High School, Overland High School, Eagle Crest High School and Smoky Hill High School heard lectures on multiple aspects of cancer and visited research labs on the Anschutz Medical Campus.

Students at the Feb. 18 event interacted with cancer specialists including Jill Penafiel, a brain tumor survivor who has worked at the University of Colorado Cancer Center for nearly four years. Her daughter, a senior at Smoky Hill, attended the event at Research Complex 2.

Students were welcomed by Marileila Varella Garcia, Ph.D., and introduced to the program.

Topics included:
Understanding cancer biology and treatments with Stephen Leong, M.D. Breast cancer: A lesson from other species with Britta Jacobsen, Ph.D. Is tanning a bad idea? With Bill Robinson, M.D. Surviving prostate cancer with Al Barqawi M.D., and survivors Craig Becker and Scott Sharp
Students were treated to lunch and educational games and also toured laboratories.

Movie icon returning to Auraria Campus for women's conference[31]

[32]
Pam Grier, movie icon with longtime ties to the Denver area, will return to the Auraria Campus on Friday, March 4, as keynote speaker for the 15th annual Women's Leadership Conference.

Grier, who attended Metropolitan State College in the late '60s, is known for a revolutionary career as an African American actress, having starred in Quentin Tarantino's "Jackie Brown" (1997) and several blaxploitation films in the '70s, such as 1974's "Foxy Brown." She was one of the first African Americans to receive a Golden Globe nomination for best actress. Recently she has appeared in the cable TV series "The L Word"and had recurring roles on "Law & Order: SVU" and "Smallville." Last year, she penned her memoir "Foxy: My Life in Three Acts" with Andrea Cagan.

The theme of this year's conference is "Our History Is Our Strength."The day will feature interactive sessions and programs designed to address contemporary approaches to leadership, inclusive of a more globalized perspective, as well as women's approaches to leadership in the Western world. Participants will identify leadership within themselves, reflect on their own strengths and cultivate confidence with regard to leadership.

The event is from 8 a.m. to 2 p.m. in the Tivoli Turnhalle. Grier's keynote address will take place during breakfast 8:30 a.m. Interested participants may register here[33] or athttp://fs11.formsite.com/sorcforms/form37/index.html?1298324628251[33]. Registration fee is $10 for faculty and staff, $5 for students and $15 for community members.

This event is co-sponsored by the Metro State Institute of Women's Studies and Services, the University of Colorado Denver Office of Student Life, the Community College of Denver Office of Student Life, the Metro State First-Year Success Program and the Metro State Office of Student Activities.

Conference to highlight role of Spanish-descendant Jews[34]

The historic contributions of Jews to the American Southwest will be the subject of a two-day conference at the University of Colorado Colorado Springs on March 10 and 11.

The Sephardic Memory and Movement Conference will highlight the history of Sephardic Jews, a sect of Judaism that traces its roots to Spain. Following their expulsion from Spain, many Sephardic Jews found their way to other countries, including the settlement of the Southwestern United States, Latin America and North Africa.

All events are open to campus and greater Colorado Springs community members. A full list of presentations and registration information is available athttp://sephardicmemory.eventbrite.com[35].

"Prior to their expulsion from Spain in 1492, Sephardic Jews had tremendous cultural, religious intellectual and political influence in the Iberian Peninsula," said Roger Martinez, assistant professor in the department of history and organizer of the conference. "In fact, many Jewish noble families that chose conversion would even serve as bishops in the Catholic Church and as key royal advisers during the 15th century.

"Other Jewish families that remained dedicated to their faith did not fare well, but even though the Edict of Expulsion forced Jews to flee or convert, it did not eliminate their culture. Instead Jewish identity morphed and concealed itself both in Spain and the New World. Resolutely, over the course of several hundred years they retained their faith as crypto-Jews and their descendants now live among us in New Mexico and southern Colorado."

Local and international experts will share information about the contributions of Sephardic Jews including music and art. Discussions of contemporary issues such as Latino and Jewish relations in Colorado also are planned.

Martinez will offer opening remarks and a brief introduction to the conference beginning at 6 p.m. March 10 at the Kraemer Family Library. A panel discussion about contemporary Latino and Jewish relations in Colorado will follow and will be lead by Seth Ward, a lecturer in Islamic and Judaic studies at the University of Wyoming.

At 7:30 p.m. in the Centennial Hall Auditorium, a musical performance by Vanessa Paloma, and the UCCS department of music is planned. Paloma, who will perform medieval Sephardic music, will be accompanied by Abe Minzer, instructor from the department of music.

To see a video of Paloma, visit http://www.youtube.com/watch?v=IYSvWsr75DM[36].

Friday will feature a full day of activities at the Lodge highlighted by a 12:30 p.m. address by Seth Kunin, author of "Juggling Identities: Identity and Authenticity Among the Crypto Jews" and pro-vice chancellor for arts and humanities at the University of Durham, England.

An interview with Kunin is available at http://www.cup.columbia.edu/static/kunin-interview[37].

Funding for the event was provided by the CU President's Fund for the Humanities and the Diversity and Excellence grants.

Chicago company licenses CU-developed software used for efficient energy[38]

Clean Urban Energy (CUE)[39], a Chicago-based company developing building-efficiency software, has completed an exclusive licensing agreement with the University of Colorado, granting the company the exclusive right to commercialize a software tool developed at CU-Boulder through a collaborative research program put in place by the

university and CUE.

The software, jointly created by CU-Boulder architectural engineering professor Gregor Henze[40] and CUE, is part of a software-as-a-service (SaaS) platform that monitors the performance and electric demand of a building's heating, ventilating and air-conditioning (HVAC) system in relation to its thermal mass (the mass in and of the building, such as concrete, furniture, and books). Once the software has "learned" how energy is stored and released by the building's thermal mass, it implements strategies that optimize the building's HVAC operations as a function of electricity prices, hourly temperatures, humidity, solar radiation and carbon emissions. Ultimately, CUE uses the thermal mass of these buildings as large-scale thermal energy storage for urban smart grids. This storage capacity introduces demand flexibility into electric grids, positively impacting reliability of the grids themselves.

"Through this collaboration with Dr. Henze and the university, we have created, and will sustain, industry and research leadership in clean energy," said Vince Cushing, chief technology officer at CUE.

"We are very fortunate to have this partnership with Clean Urban Energy," added Kate Tallman, director of Technology Transfer for CU-Boulder. "CUE provides Dr. Henze's technology with access to a real world test bed in Chicago and a ready path to market."

CUE demonstrated its technology in 50 large commercial buildings in the Chicago area in 2009, and in 2010, the company used this software to optimize two office buildings in the Chicago Loop totaling 1.94 million square feet. CUE plans for full launch of its SaaS platform for the 2011 cooling season. CUE recently closed with Elan Management on a seed financing round that will propel the company to market.

Rankin named associate vice chancellor for research[41]

Rankin

Patricia Rankin, professor of physics at the University of Colorado Boulder, has been named associate vice chancellor for research.

"Professor Rankin brings a wealth of experience to the position, and I am confident that
she will reach out to faculty in all disciplines to enhance the quality of research, scholarship and creative work on our campus," said Stein Sture, vice chancellor for research.

Rankin most recently served as interim associate vice chancellor for research, following service as faculty director in the Office of Faculty Affairs, and before then as associate vice chancellor for diversity, equity and community engagement.

While serving as professor in the department of physics, she served for two years as program officer for particle physics at the National Science Foundation (NSF), and associate dean in the College of Arts and Sciences. She also has served as the principle investigator for the campus' NSF Advance Institutional Transformation Program and helped develop the campus' Leadership Education for Advancement and Promotion (LEAP) program.

Rankin first came to CU-Boulder in 1988.

The offices of the Vice Chancellor for Research and the Dean of the Graduate School work in tandem with campus research institutes, graduate departments and local and regional agencies to expand research and graduate education opportunities.

Boulder professor named Google Science Communication Fellow[43]

Townsend

Alan Townsend, a professor of ecology and evolutionary biology at the University of Colorado Boulder, recently was named one of 21 Google Science Communication Fellows for 2011.

Google said the awards[45] were initiated to foster a more open, transparent and accessible scientific dialogue aimed at inspiring pioneering use of technology, new media and computational thinking in the communication of science to diverse audiences.

Initially the awards focus on communicating the science on climate change.

Townsend's background is as an ecosystem ecologist and biogeochemist. Much of his work focuses on controls over nutrient limitation and carbon storage in moist tropical and alpine tundra ecosystems, and how these controls help researchers understand the response of such systems to human-induced environmental change.

The Google fellows were elected from a pool of applicants of early to mid-career Ph.D. scientists nominated by leaders in climate change research and science-based institutions across the United States.

In June, the fellows will participate in a workshop, which will integrate hands-on training and facilitated brainstorming on topics of technology and science communication. Following the workshop, fellows will be given the opportunity to apply for grants to put their ideas into practice. Those with the most impactful projects will be given the opportunity to join a Lindblad Expeditions and National Geographic trip to the Arctic, the Galapagos or Antarctica as a science communicator.

Hernandez first recipient of namesake award[46]

Theresa D. Hernandez, associate professor at the University of Colorado Boulder, will be the first recipient of the Theresa Hernandez Traumatic Brain Injury Trust Fund Community Award. The award, given by the State of Colorado Department of Human Services, honors her work helping Colorado's citizens recover from traumatic brain injury or TBI.

Along with her research aimed at improving clinical treatment following brain injury, she also worked with Rep. Todd Saliman to make possible the 2002 law that created the Colorado Traumatic Brain Injury Trust Fund Program. Since its inception, the program is estimated to have helped 4,000 people deal with the effects of TBI and to support their health care and rehabilitation.

Hernandez will be honored formally on Thursday, March 3.

Dropping names ...[47]

Handelsman

Mitch Handelsman, professor of psychology at the University of Colorado Denver, recently gave four invited presentations at the University of Texas at San Antonio. Three were for the Teaching and Learning Center: "Teaching Philosophies," "Positive Ethics and Positive Teaching," and "Collaborative and Formative Course Evaluation: How to Implement Student Management Teams to Improve Teaching and Learning." He also facilitated a discussion for leadership, "Being Ethical in Inclusive Leadership." ... **Farah Ibrahim** at the School of Education and Human Development at the University of Colorado Denver had two proposals accepted for presentation at the American Psychological Association's 2011 annual conference. The first is a research project on "Assessment of Polish Worldviews: Universal Values Perspectives Using My Scale to Assess Worldview,"with Jan Cieciuch from the University of Finance and Management, Warsaw, Poland. The second is a symposium she is chairing on"The Implementation of Social Justice Organizational Initiatives: Current and Future Strategies for Long-term Change in Counseling and Psychology" with social justice advocates in psychology. ... An article on research by the **Kevin J. Krizek**, associate professor of planning and design at CU Denver, co-director of the Active Communities/Transportation (ACT) Research Group and director of the Ph.D. program in design and planning, is in the Feb. 14 issue of The Urban Transportation Monitor (Vol. 25 No. 1). The article on the research project is titled "Measuring Walking and Cycling Using the PABS (Pedestrian and Bicycling Survey) Approach: A Low-Cost Survey Method for Local Communities." ... **Nancy Leech, an** associate professor of research, statistics and evaluation methods at the School of Education, University of Colorado Denver, and her co-authors were selected as co-winners of the 2011 Southwest Educational Research Association (SERA)[49]Outstanding Paper Award for their paper, "A Mixed Research Study of Approaches Used by Mixed Research Instructors." Leech earned her degrees from Colorado State University and CU-Boulder. Co-winners were declared for the first time in SERA history because judges' rankings were exactly tied. Both author teams will receive an honorarium, and be noted on the SERA website, and in all future SERA conference programs.

Entrepreneurship competition seeks business plans[50]

From soup to nuts to hair and clothing and just about everything in between, the Bard Center Business Plan Competition has accelerated entrepreneurial opportunities for dozens of start-ups. Celebrating the competition's 10th anniversary, the Bard Center at the University of Colorado Denver's Business School is forging ahead with even more opportunities and prizes for CU's best ideas.

Year after year, competitors vie for $10,000 in cash and in-kind prizes. The competition culminates June 16 as six finalists present their proposals to a panel of judges and community members. Companies interested in participating must submit a registration form and participant waiver agreement by March 25 and submit the complete proposal [51] by April 29.

Past winners include:
CaraSolva, which provides cost-effective, point-of-care solutions for out-of-hospital care. Olomomo Nut Co., a high-end, all-natural and organic nut brand with kettle-roasted nuts, coated with original and exotic spices and flavor blends. Tensegrity Prosthetics, for a prosthetic foot. MetroBoom, a full-service style salon exclusively for men.
The Business Plan Competition is designed for early stage companies that have received no Angel or Venture funding and that have generated little or no revenue to date. The primary purpose of the competition is to provide these early stage ventures with an opportunity to test their ideas and receive meaningful feedback on their business plans.

This year, the competition is open only to CU entrepreneurs. Check out the event information[52] page for complete details and/or register online[53].

Another way to share cost-saving ideas[54]

The state of Colorado recently introduced an employee-recognition program aimed at generating cost-cutting ideas for state agencies. A similar venture is the University of Colorado's own recognition program, introduced last October as an Office of University Controller initiative.

CU Shared Practices (CUSP) welcomes the submission of ideas that could generate a positive fiscal impact or conserve existing resources. Ideas may be submitted at www.cu.edu/controller/initiatives/cusp/[55]; the OUC will confirm that it is in practice and that there is no conflict with existing policies and procedures – and publish it on the CUSP website to share with your university colleagues.

With prizes ranging from $500 to $2,000, the office urges everyone to get creative, join in and meet us on the CUSP.

Fitzsimons Early Learning Center sets tuition rates[56]

Full- and part-time tuition rates for the under-construction Fitzsimons Early Learning Center on the Anschutz Medical Campus have been announced. View the schedule here[57].

Nominations needed for most accessible websites[58]

The Universal Design and Accessibility Committee (UDAC) is seeking nominations for best website design among all University of Colorado campuses.

The criteria are usability, universal design and accessibility, along with other features such as adherence to Web standards.

To nominate a website or web page, either from your own department or another group from CU, please visit theUDAC website[59] or contact Howard Kramer, hkramer@colorado.edu[60], 303-492-8672, by Friday, March 4. Winners and prizes will be announced at the end of the month.

Links
[1] https://connections.cu.edu/stories/researchers-determine-benefit-using-human-cells-spinal-cord-injury-repair[2]

http://www.plosone.org/home.action[3] http://www.medschool.ucdenver.edu/[4] http://www.urmc.rochester.edu/[5]
http://www.urmc.rochester.edu/biomedical-genetics/faculty/proschel-lab.cfm[6]
http://www.ucdenver.edu/about/WhoWeAre/Research/Pages/spinalCordInjuries.aspx[7]
http://www.ucdenver.edu/academics/colleges/medicalschool/departments/Neurosurgery/Pages/Neurosurgery.aspx[8]
http://www.urmc.rochester.edu/biomedical-genetics/faculty/noble-lab.cfm[9] http://www.urmc.rochester.edu/stem-cell/index.cfm[10] http://www.urmc.rochester.edu/biomedical-genetics/faculty/mayer-proschel-lab.cfm[11]
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https://connections.cu.edu/stories/women-share-journeys-success-expanded-symposium[14]
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http://fs11.formsite.com/sorcforms/form37/index.html?1298324628251[34]
https://connections.cu.edu/stories/conference-highlight-role-spanish-descendant-jews[35]
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https://connections.cu.edu/people/boulder-professor-named-google-science-communication-fellow[44]
https://connections.cu.edu/sites/default/files/wp-content/uploads/2014/01/people_Townsend.jpg[45]
http://googleblog.blogspot.com/2011/02/making-sense-of-science-introducing.html[46]
https://connections.cu.edu/people/hernandez-first-recipient-namesake-award[47]
https://connections.cu.edu/people/dropping-names-37[48] https://connections.cu.edu/sites/default/files/wp-content/uploads/2014/01/people_Handelsman.jpg[49] http://www.sera-edresearch.org/[50]
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